

**Amendments to the Drawings:**

The attached Replacement Sheet, which includes corrections to the transition conditions of element 415, replaces the original Figure 4. The attached Annotated Sheet indicates the changes that were made to Figure 4.

Attachment: Replacement Sheet  
Annotated Sheet

## **REMARKS/ARGUMENTS**

This Amendment and Response to Office action is submitted with a Request for Continued Examination (RCE) in response to the final Office action dated August 29, 2006. Claims 1-22 were pending in the application. The Office has rejected claims 1-22 as described below.

In this Amendment and Response to Office Action, claims 1-20 and 22 have been amended, no claims have been cancelled, and claims 23-25 have been added. Reconsideration and reexamination are respectfully requested.

As a preliminary matter, the Office has stated in multiple locations in the Office action that one claim has the "same" scope as another claim in this application. The Applicant respectfully traverses this assertion and submits that each pending claim in this application uniquely recites the invention, although some similar features may be shared among the various claims.

### **Examiner Interview Summary**

The Undersigned wishes to thank Examiner Martinez and his supervisor, Examiner Fleming, for their time during a telephonic examiner interview on October 23, 2006. In that interview, the Examiners and the Undersigned discussed the Gluck reference as it pertains to independent claims 1, 7, and 15. No agreement was reached.

### **Drawings**

The Office has objected to FIG. 4 based on a mislabeling of the "Y" and "N" labels relating to the element 415. The Applicant submits herewith a replacement drawing sheet with the location of the "Y" and "N" labels reversed and annotated drawing sheet showing the changes. The Applicant believes this drawing amendment to FIG. 4 corrects the error and resolves the Office's objection.

### **Rejections Under 35 U.S.C. § 102**

The Examiner has rejected claims 1-4, 7-10, 13-15 and 21-22 under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent Publication No. 2003/0088638 A1 to Gluck et al. ("Gluck").

Generally, Gluck discloses a method of copying data over a network in accordance with a protocol (e.g., ESCON) that supports a given logical address range. The method includes

establishing a logical path over the network from a primary storage system to a secondary storage system using logical path addresses within the logical address range. A virtual path is created over the logical path to carry the data between a source storage device in the primary storage system and a destination storage device in the secondary storage system. A mapping creates a virtual channel path for the PPRC operation over the logical channel path from LSS0 (i.e., logical subsystem 0) of the primary system to LSS0 of the secondary system. Gluck, U.S. Application No. 2003/0088638, page 2, paragraph [0012]. Each logical subsystem (LSS) comprises an array of storage volumes, typically made up of magnetic disks. Gluck, U.S. Application No. 2003/0088638, page 1, paragraph [0002]. The Applicant notes that Gluck operates using logical addresses and device addresses in its transfers between the primary system and the secondary system.

Claim 1 recites a host interface, which is not disclosed or suggested in Gluck. More specifically, claim 1 is directed to a host interface having a channel select bit encoder that asserts to a media controller one or more channel select bits to indicate virtual channel of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller and a virtual channel controller that establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller. In contrast to the features recited in claim 1, Gluck discloses management of multiple communication paths through a network by transmitting logical addresses and device addresses to define a virtual path over the network between a primary storage system and a secondary storage system. Notably, Gluck is unconcerned with the specifics of communications between a host interface and a media controller. As such, after data frames are received at CU 42 at the terminus of the virtual path, Gluck is silent regarding the subsequent communications over the data bus between the host interface and the media controller, except to state that data frames are copied to the actual target LSS and device (via logical and device addresses). See e.g., Gluck, paragraph [0050]. At best, Gluck mentions that device-level protocols are “associated with the execution of an input/output (I/O) operation for a specific I/O device” (Gluck, paragraph [0003]) but does not disclose or suggest the recited virtual channels involved in address-less communications between a host interface and a media controller. Therefore, Gluck fails to disclose or suggest the indicated virtual channel of the host interface, the corresponding virtual channel of the media controller, and the connection for address-less transfer between the two virtual channels, as recited in claim 1. For the foregoing reasons, Gluck fails to disclose all of the elements recited

in claim 1 and therefore fails to anticipate or make obvious the invention recited in claim 1. Allowance of claim 1 is respectfully requested.

Claims 2-4 depend from claim 1, which is believed to be allowable. As such, claims 2-4 include the same patentably distinct features as claim 1 and therefore are believed to be patentable for at least the same reasons as claim 1. Withdrawal of the rejection and allowance of claims 2-4 are respectfully requested.

Claim 7 recites a media controller, which is not disclosed or suggested in Gluck. More specifically, claim 7 is directed to a media controller having a channel select bit decoder that decodes one or more channel select bits received from a host interface indicating one of a plurality of virtual channels through which the host interface will communicate over a data bus with the media controller and a virtual channel controller that decodes the one or more channel select bits and establishes a connection for address-less transfer between the indicated virtual channel of the host interface and a corresponding virtual channel of the media controller selected based on the one or more decoded channel select bits. In contrast to claim 7, Gluck merely discloses management of multiple communication paths through a network and is unconcerned with the specifics of communications between a host interface and a media controller, as discussed with regard to claim 1. As such, Gluck fails to disclose or suggest the indicated virtual channel of the host interface, the corresponding virtual channel of the media controller selected based on the one or more channel select bits, and the connection for address-less transfer between the two virtual channels. For the foregoing reasons, Gluck fails to disclose all of the elements recited in claim 7 and therefore fails to anticipate or make obvious the invention recited in claim 7. Allowance of claim 7 is respectfully requested.

Claims 8-10 and 13-14 depend from claim 7, which is believed to be allowable. As such, claims 8-10 and 13-14 include the same patentably distinct features as claim 7 and therefore are believed to be patentable for at least the same reasons as claim 7. Allowance of claims 8-10 and 13-14 are respectfully requested.

Claim 15 recites a data storage device and includes similar features as claimed in claims 1 and 7. Claim 15 is believed allowable for at least the reasons that Gluck fails to disclose or suggest the indicated virtual channel of the host interface, the corresponding virtual channel of the media controller, and the connection for address-less transfer between the two virtual channels, as recited in claim 15. Accordingly, allowance of claim 15 are respectfully requested.

Claims 16-18 and 21-22 depend from claim 15, which is believed to be allowable. As such, claims 16-18 and 21-22 include the same patentably distinct features as claim 15 and

therefore are believed to be patentable for at least the same reasons as claim 15. Withdrawal of the rejection and allowance of claims 16-18 and 21-22 are respectfully requested.

#### Rejections Under 35 U.S.C. § 103

The Examiner has rejected claims 5, 11, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Gluck in view of U.S. Patent No. 6,763,405 to Sardo et al. ("Sardo").

Claim 5 depends from base claim 1, claim 11 depends from base claim 7, and claim 19 depends from base claim 15. As such, claims 5, 11, and 19 include the same patentably distinct features as their respective base claims, and therefore are believed to be patentable for at least the same reasons as their respective base claims. Withdrawal of the rejection and allowance of claims 5, 11, and 19 are respectfully requested.

The Examiner has rejected claims 6, 12, and 20 under 35 U.S.C. § 103(a) as being unpatentable over Gluck in view of U.S. Patent No. 5,790,811 to Hewitt.

Claim 6 depends from base claim 1, claim 12 depends from base claim 7, and claim 20 depends from base claim 15. As such, claims 6, 12, and 20 include the same patentably distinct features as their respective base claims, and therefore are believed to be patentable for at least the same reasons as their respective base claims. Allowance of claims 6, 12, and 20 are respectfully requested.

#### Allowable Subject Matter

The Applicant acknowledges the withdrawal of the previously indicated allowability of claims 14 and 22.

#### New Claims

New claims 23-25 have been added and are believed to be patentable for at least the reason that they depend from base claims that are believed to be allowable, as discussed herein.

#### Conclusion

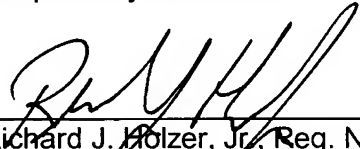
Claims 1-25 are currently pending in the application. Claims 1-20 and 22 have been amended. Claims 23-25 have been added. No claims have been cancelled. Applicant has fully responded to each and every rejection in the Office action dated August 29, 2006 and believes that claims 1-25 are in a condition for allowance. Applicant therefore requests that a timely Notice of Allowance be issued in this case.

With an accompanying fee transmittal, the Applicant has authorized payment of claims fees for 3 additional dependent claims. The Applicant believes no other fees or petitions are due with this filing. However, should any such fees or petitions be required, please consider this a request therefor and authorization to charge Deposit Account No. 50-3199 as necessary.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney. If the Examiner believes any issues could be resolved via a telephone interview, the Examiner is invited to contact the undersigned at the telephone number listed below.

Dated: 11-27-06

Respectfully submitted,

  
\_\_\_\_\_  
Richard J. Holzer, Jr., Reg. No. 42,668  
Attorney for Applicant  
USPTO Customer No. 45346

HENSLEY KIM & EDGINGTON, LLC  
1660 Lincoln Street, Suite 3050  
Denver, Colorado 80264  
Tel: 720-377-0770  
Fax: 720-377-0777

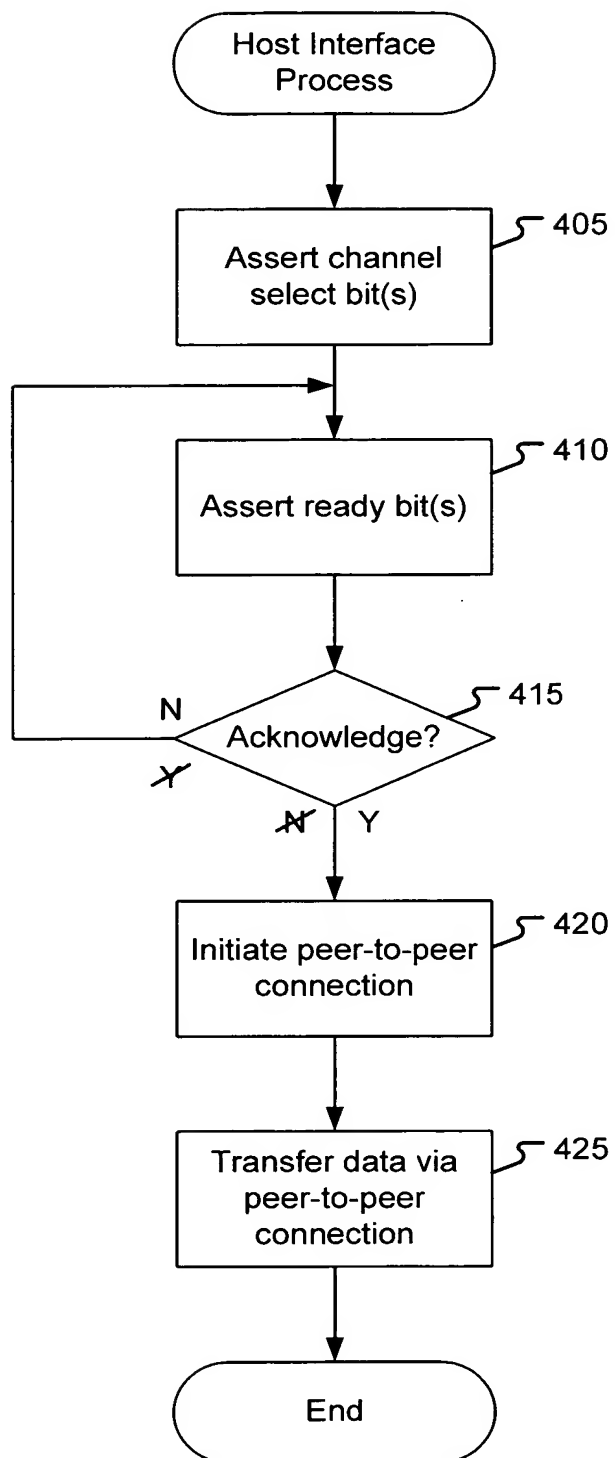


FIG. 4